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**UNDERSTANDING ATTITUDES ON  
GENDER AND TRAINING AT THE  
U.S. AIR FORCE ACADEMY**

by

James J.W. Do

B.S., United States Air Force Academy, 2000

A thesis submitted to the Graduate Faculty of the  
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Understanding Attitudes on Gender and Training at the U.S. Air Force Academy

Thesis directed by Associate Professor Abby L. Ferber

This research examined the relationship between male and female cadets' views toward women in society, in the military, and at the U.S. Air Force Academy (USAFA) with knowledge and understanding of academic, military, and physical fitness standards at USAFA. Prior to the admission of women at USAFA, the Department of Physical Education created physical fitness standards based on research that showed physiological differences in males and females (Baldi, 1991; Petosa, 1989). This study found that male cadets had high sexist attitudes toward women in society, did not agree with the involvement of women in combat, did not agree with women holding certain jobs in the military, and believed women negatively impacted standards at USAFA. About 66% of the cadets surveyed believed differences in physiology warranted different sets of fitness standards; however, about 17% of the cadets, who were all male, supported equal standards based on the fact that men and women are expected to perform the same jobs in the Air Force. According to the results, high sexist attitudes of women are good indicators of support for equal physical fitness standards. The views expressed in this study are those of the author and do not reflect the official policy or position of the United States Air Force, Department of Defense, or the U.S. Government.

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*This thesis is dedicated to my  
beautiful wife and daughter.*

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## **CHAPTER I**

### **INTRODUCTION**

The purpose of this study is to examine USAFA cadets' knowledge and understanding of academic, military, and physical fitness standards at USAFA. Further, this study will examine the relationship between cadets' views toward women in society, women in the military and female cadets at USAFA. Prior to the admission of women at USAFA, the Academy's Department of Physical Education created different physical fitness test standards based on research that showed physiological differences in male and female cadets (Baldi, 1991; Petosa, 1989). Academic and military standards are the same for male and female cadets; however, the study will determine cadets' knowledge and perceptions of these standards as well as the standards for physical fitness testing. The study will also examine how views toward women in society, in the military, and at USAFA affect cadets' knowledge of and attitudes toward equitable standards in physical fitness testing.

The first hypothesis is that male cadets will have higher sexist attitudes than women toward the roles of women in society, the roles of women in combat, women and certain military jobs, and will believe women negatively impact standards at USAFA. The second hypothesis is that male cadets believe female cadets have a negative impact on physical fitness standards at USAFA. The third hypothesis is that male cadets who have high sexist attitudes toward women in society, women in the military, and women at USAFA, will support equal physical fitness standards for both male and female cadets. Cadets who espouse egalitarian beliefs will understand the equitable nature of the

different physical fitness standards, and will reflect their beliefs by supporting different physical fitness standards. Specifically, levels of sexism regarding women in society, the roles of women in combat, women and certain military jobs, and the impact of women at USAFA are indicators of support for equal or equitable standards of physical fitness.

Finally, this research may contribute to the education of the cadet wing and Academy leadership and staff regarding the purpose of physical fitness testing and the reasons why standards are set based on physiological differences between males and females. USAFA leadership may also be able to use the results of this study to identify the sources of negative attitudes toward female cadets and develop further tools to educate the cadet wing and improve the gender climate.

### **Background**

On March 28, 2003, as directed by the Secretary of the Air Force and the Chief of Staff of the Air Force, the "Bring Me Men..." sign on the United States Air Force Academy (USAFA) terrazzo wall came down. These opening words of Samuel Walter Foss' poem, *The Coming American*, greeted the all-male incoming fourth-class cadets (first year cadets) at USAFA since 1964. Even after the arrival of the first class with female cadets in 1976, the sign remained in place as part of USAFA history and tradition. Academy officials ordered the removal of the sign in March 2003 just a few days after top Air Force officials released the United States Air Force Academy Agenda For Change (Headquarters United States Air Force Academy, 2003b). The removal of the sign heralded a series of changes in response to numerous sexual assault scandals that surfaced at USAFA in January 2003. The Agenda For Change outlined an overhaul of

leadership, traditions, training, and culture to foster a new environment more conducive to the Academy's pursuit of its goal to produce leaders of character.

Since the 1975 Stratton Amendment to the defense authorization bill for fiscal year 1976, which opened the service academies to women, the Agenda For Change was the most recent and most significant transformation of culture designed to improve the gender climate at USAFA. Some adjustments directed by the Agenda For Change were short-sighted and failed to take into account the overall culture that is established at USAFA. For example, one policy segregates the female cadets so that female cadet rooms are grouped closer to the women's restrooms. Academy leadership presumed female cadets would have fewer encounters with male cadets, and decrease harassment, if female cadets did not have to walk far to the bathroom in their shower robes. While created with good intentions to try and reduce harassment of female cadets, policies like this are only a short-term fix for deep-rooted attitudes toward women. Separating female cadets from the male cadets, in an attempt to decrease contact and the possibility of harassment, is merely avoiding the problem and side-stepping the issues of negative cadet attitudes toward women at the Academy. These actions make an effort to change behavior or avoid problems altogether but do not focus on the root of the issue, which is negative attitudes toward female cadets.

Barriers to complete integration and acceptance of women still exist. My review of the literature examines how USAFA developed gender-normed physical fitness standards based on physiological differences, the difference between equality and equity, and the physical fitness standards of Virginia Military Institute (VMI) compared with USAFA. My research examines cadet attitudes and perceptions in academic, military,

and physical fitness standards at the Air Force Academy. Before discussing standards at USAFA, however, this review presents a brief history of women in the military, the integration of women at VMI and USAFA, the Agenda For Change, and the contact hypothesis on attitudes toward women at USAFA.

### **History of Integration**

The integration of women into the armed forces was one outcome of the arduous journey of women who fought to receive recognition and equal rights during the second wave of feminism in the United States. Freedman (2002) found that prior to Title VII of the Civil Rights Act of 1964, which outlawed racial and sex-based discrimination, women entered the work force and were viewed as women first and workers second. According to Freedman, this identity and treatment created a belief of inferior value placed on women's work. Amott and Matthaei (1991) noted that as women entered the work force, they struggled for earnings and power in a system where employers commonly used them as a low-wage work force. Women had difficulty protecting themselves from discharge during periods of economic recession because of their low position in the work force hierarchy. Women constantly battled individually and collectively for higher wages, access to better jobs, and struggled to advance within an inherently unequal work force (Amott & Matthaei, 1991). Up through World War II, men were able to monopolize the top managerial, administrative, and professional jobs while women were segregated in lower level and lower paying jobs (Amott & Matthaei, 1991). Title VII of the Civil Rights Act of 1964 banned discrimination in hiring, salary, and promotion and finally opened male-dominated jobs to women, including the military (Freedman, 2002).

The military was a traditional masculine calling, and the segregation of women from actual military service was evident in early female support and auxiliary groups. Women were cordoned off from the male culture of the military in these auxiliary groups, whose job it was to only support the functions of the military from the background. Women were so effective in the jobs they performed in these auxiliary groups during World War II that Congress considered drafting women for service (Titunik, 2000). When their positive contributions to the military became evident, American military leaders, including General Dwight Eisenhower and Admiral Chester Nimitz, urged Congress to give permanent legal status to women in the services (Titunik, 2000). The most noteworthy factor in the introduction of women in the military was the Women's Armed Services Integration Act of 1948. This act granted permanent status to military women, but it limited their numbers and banned them from combat planes and ships (Gruenwald, 1997). The proportion of women in the armed services could not exceed two percent of the total number of military members, they could not achieve rank of General or Admiral, and the military could discharge them for motherhood (Titunik, 2000). The act allowed each military branch to assign women so they would not engage in direct ground combat. Although many limitations prevented complete integration, the Women's Armed Services Integration Act officially recognized the increasing roles of women in the military.

With passage of Title VII of the Civil Rights Act of 1964, the end of the draft, and introduction of the All-Volunteer Force (AVF) in 1973, women entered military service in record numbers and the armed forces realized that women were becoming essential rather than ancillary in their military roles (Titunik, 2000). Titunik noted that the

increase in female military members was a direct result of the lack of qualified male personnel following the end of the draft in 1973. Prior to the AVF, the only women permitted in the U.S. Armed Services were nurses (Griffin, 1992). Personnel needs led to the creation of the Women's Army Corps (WAC), the Navy's Women Accepted for Voluntary Emergency Service (WAVES), the Coast Guard's Semper Paratus: Always Ready corps (SPARs), and the Air Force's Women's Airforce Service Pilots (WASP) to fill the void left by many men who had gone off to fight in World War II (Griffin, 1992). Gradually, the restrictions lifted and women's participation in the military increased. During the Vietnam War, the two percent limitation and ceiling on women's promotions were removed (Titunik, 2000). By 1993, all military positions were opened to women, except those positions involved with direct combat.

The armed services facilitated the movement of women into the military by opening doors and eliminating barriers to service, and society accommodated women into the military by proclaiming their equality with men and their ability to enter the same areas in the workforce. For women to participate in the traditionally defined masculine institution of the military, the military had to transform and become more compatible for women or women had to change and become more seemingly suited to military service (Segal, 1995). Women embraced the changes, and the law granted them acceptance into the armed services; however, women encountered confusion and resistance from a military with a masculine culture. Male military members believed women did not make good soldiers because they saw them as weak, both physically and emotionally (DeGroot, 2001). Male military members also believed that integrating women would negatively impact training due to differences in physiology, deterioration of unit cohesion due to

privacy issues, and discipline problems created by fraternization (Snyder, 2003). Changes in military rules and regulations occurred because of the increasing role of women in the armed forces, but changes in military culture were not as quick to take place.

Military schools and the federal service academies experienced confusion and resistance with the introduction of women into the cadet ranks. Simply allowing women to apply for admission without substantial changes in culture caused many problems at the service academies (Samuels & Samuels, 2003). Virginia Military Institute and the United States Air Force Academy are two institutions that employed different approaches to gender integration. Both military schools provided a distinct military experience, called an *adversative method*, which features deliberate emotional and psychological stress, little privacy, regulation of personal behavior, and the indoctrination of certain values (Kimmel, 2000a). These schools are *total institutions* in which academics, residential life in the barracks, and military training are all integrated into a closed system in which cadets are immersed from the moment they arrive (Kimmel, 2000a). Both institutions integrated women into their all-male ranks and experienced similar negative attitudes associated with the integration efforts; however, each school applied their own solution for improving the gender climate. While USAFA accommodated women and created adjustments for them based on differences, VMI treated women and men exactly the same. These distinctive approaches to integration created unique complications with the integration process at both institutions.

### Integration at VMI

VMI is a Southern public college that, up until a few years ago, was one of two remaining colleges in the United States that offered a military-style, males-only education (Vojdik, 1997). Founded in 1839, VMI sent their cadets to fight federal troops in the Civil War at New Market, Virginia. According to Vojdik (1997), VMI constructed its defense of the exclusion of females around the myth of gender difference for more than a century. Vojdik noted that VMI regularly hired prominent social scientists to support the exclusion of women from this institution based on stereotypes of physiological and sociological differences between males and females. Vojdik asserts that the school's experts, for example, argued that men were more self-confident and needed a more structured and competitive environment than that of a regular college. VMI continued to exclude females, persevering through the women's rights movements and equal opportunity laws, until legal action focused the nation's attention on this long-standing male-only institution.

In 1990, a female high school student seeking admission to VMI filed a complaint with the Attorney General of the United States, resulting in a federal suit against the Commonwealth of Virginia and VMI (Epstien, 1997). The bastions of masculinity were about to be tested as the suit alleged that VMI violated the Equal Protection Clause by offering special educational opportunities exclusively to men. In *United States v. Virginia et al.* (1996), the Supreme Court ruled that VMI's categorical exclusion of women denied them equal protection. For the first time in their history, VMI would have to accept women into their ranks. Superintendent Josiah Bunting III, initially a strong



opponent of the integration of women at VMI, decided to accept the introduction of women at VMI instead of putting up a fight. Bunting stated,

If we're going to do it, we're going to do it well – extraordinarily well....we will have to effect a cultural change, an attitudinal change, many of us in ourselves: doubt, skepticism, cynicism, sorrow are not a fertile soil in which to plant the seeds of a new coeducational VMI. (Kimmel, 2000a, para. 22)

Some supporters of VMI embraced the change willingly while Bunting brought others kicking and screaming. The VMI leadership instituted strict policies on sexual harassment, fraternization and hazing, and brought women cadets in from Texas A&M and other military schools to serve as mentors to the incoming female classes (Kimmel, 2000a). Aside from the changes in policy regarding male-female interactions, VMI did not change the daily routines of the *rats* (first-year cadets) or the honor code at all (Kimmel, 2000a). If women were coming to VMI, Bunting wanted the women assimilated into the culture and held to the exact same standards as anyone else in the corps. Unfortunately for female cadets at VMI, assimilation did not mean accommodation. Bunting vowed to effect a cultural and attitudinal change at VMI; however, this change did not happen immediately. If women wanted to join the ranks at VMI, they had to do exactly the same things the men did in every aspect of their cadet lives. VMI agreed to accept women but was not going to change one bit to accommodate them.

### **Integration at USAFA**

The Air Force Academy, founded in 1955, is very new compared to the pre-Civil War VMI. VMI was an all-male institution for over 140 years and USAFA was all-male

for only 21 years. Congress passed the Stratton Amendment to the defense authorization bill in 1976, which ordered the Army, Navy, and Air Force academies to integrate women in 1976 (Gruenwald, 1997). VMI did not fall under the authority of the Stratton Amendment so they did not assimilate women until twenty years later. The masculine culture at USAFA was nowhere as deeply-rooted compared to VMI, so it was reasonable to expect that USAFA would integrate women into the cadet ranks sooner than a masculine stronghold such as VMI. Although both institutions experienced different histories, both experienced similar changes and resistance following the integration of women. With the integration of women in the military, USAFA initiated studies of female cadets and the integration process in order to prepare for the introduction of female cadets into its ranks. DeFleur, Wood, Harris, Gillman, and Marshak (1985) spent a year at USAFA from 1976 to 1977 in order to design and initiate a project to assess the integration process over time. Thomas, Coté, Zande, Riding, and Elliot (1975), created the Women's Integration Research Project in order to smoothly and efficiently integrate the first class of women into the physical education program. In fact, these initial reviews in the masculine culture at USAFA were just a starting point on a long journey of gender integration that continues to this day.

According to a study immediately following the integration of women at the federal service academies, Looney, Kurpius & Lucart (2004) confirmed that males in the first sex-integrated class at the U.S. Military Academy (USMA) at West Point, and the U.S. Naval Academy (USNA) at Annapolis, held more traditional gender role attitudes than their female counterparts. In addition, although male attitudes at USNA changed favorably in the first year of sex-integration, most men still preferred keeping the

academy all male. White male cadets at West Point told their African American classmates, "You belong in the Corps ... it's the women we don't want" (Francke, 1997, p. 217). Like their companions at USMA and USNA, USAFA cadets held the same beliefs, to a certain degree, that women did not belong in the cadet wing. Male cadets at USAFA had significantly more traditional attitudes about women's roles than males at civilian institutions (DeFleur et al., 1985; Looney, Kurpius & Lucart, 2004). The Fall 2004 Cadet Climate Survey (Gray, Smith, & Luedtke, 2004) shows that in each year since 1998, approximately 21% of the male cadets in the cadet wing thought women did not belong at USAFA. In a recent study of gender integration at USAFA, Samuels and Samuels (2003) recognized that all members of the integrating academies were told by the leadership that integration would occur, and it would go smoothly, yet if the members refused to accept females into the ranks the integration process would be far from smooth. USAFA cadets took the latter path and integration did not go smoothly. The Class of 1979, unofficially known as the LCWB (Last Class With Balls), took pride in the fact that they were the last all-male class to graduate from USAFA. According to Samuels and Samuels (2003), many older USAFA male graduates who were socialized into a culture of male privilege were highly resistant to any change in the system, and they become a hindrance to integration efforts. This stubborn attitude reinforced the masculine culture at USAFA and was among many factors that led to the Agenda For Change. The alumni who were socialized in this old culture did little to change the system for the benefits of the integrated female classes.

Since 1993, senior civilian and military leadership of the Air Force and USAFA were aware of serious problems of sexual assault and harassment at the Academy but did

not respond to eliminate the problems (Fowler Commission Report, 2003). According to the report, there were 142 allegations of sexual assault from 1993 to 2002. Since 1993 there have been numerous attempts to change policies that were hostile to females, but the LCWB mentality prevented the culture from accepting females completely. Unlike Bunting's efforts to bring everyone toward integration at VMI, USAFA's leadership did not do anything other than acknowledge the fact that women were at USAFA to stay. In the Colorado Springs Gazette, Zubeck (2003) reported a series of lapses in the sex assault reporting system at USAFA. In 1993, Superintendent Lt. Gen. Bradley Hosmer created a sex assault reporting system in response to the rape of a female cadet at USAFA. He also commissioned the USAFA Center for Character Development to improve the overall character development of the cadet population through education and training. General Hosmer also created a sexual assault hotline that offered confidential counseling to assault victims (Fowler Commission Report, 2003). Even though the Academy took measures to try and decrease sexual assaults through education and training, the situation did not improve at USAFA. Air Force officials conducted an investigation of the reporting system in 1996 and made recommendations to bolster its potential. The investigation yielded a report that detailed a culture of silence that discouraged women from reporting sexual assaults; however, USAFA ignored the recommendations of the report and did nothing to fix the issues it raised. Zubeck (2003) also found that another investigation of the reporting system in 2000 generated a similar whistle-blowing report. The Senate Armed Services Committee received the report but nothing happened. In 2002, Senator Wayne Allard (R-CO) took exceptional interest in the harassment cases at USAFA and began an investigation and inquiry about the incidents. According to the

Fowler Commission Report (2003), Senator Allard brought forth several issues of sexual misconduct to Academy leadership as a result of several requests from cadets' parents or citizens concerned with the state of affairs at USAFA.

As allegations and investigations of sexual harassment, sexual assault, and rape mounted at USAFA, the media attention also increased. USAFA had done little to nothing about the problems surrounding gender integration, the prevailing culture, and subsequent harassment and now it was time to address the failings of the old system. Following this intense scrutiny, the Air Force Academy experienced a completely unprecedented overhaul of military culture and way of life.

### **Agenda For Change**

The integration of women in the military has had both positive and negative results, but it has been the failures, rather than the successes, that have generated media interest and public attention (Titunik, 2000). Senator Allard's investigative efforts at USAFA gained momentum with the escalating media coverage. After a decade of ignoring reports and recommendations about harassment, USAFA finally came head to head with a massive media attack. Numerous newspaper articles and television news stories focused the nation's attention on the gender environment at USAFA. In response to the wave of criticism, Department of Defense Secretary James Roche ordered General Counsel Mary Walker to investigate the Academy's policies and procedures on sexual harassment and assaults. The report concluded that the sexual assault reporting system broke down over time, and the Air Force Academy fostered a culture of hostility toward women (Zubeck, 2003). According to a 2003 Department of Defense Inspector General survey, approximately 19% of the female cadets reported that they were the victims of

sexual assault or attempted sexual assault in their time at USAFA (Fowler Commission Report, 2003).

According to the National Security and International Affairs Division (1995), or NSIAD, female cadets reported sexual harassment which included derogatory comments, jokes, nicknames, comments that standards had been lowered for women, mocking gestures, whistles and catcalls, exclusion from social activities, and unwanted pressure for dates. The report found that the most common forms of harassment reported by female cadets were not sexual advances but harassment in the form of gender-related verbal comments or visual displays. Through the use of message boards and blogs, cadets used the anonymity of the internet to voice their opinions and created visual displays of harassment toward female cadets. The USAFA-themed *www.eDodo.org* is an underground online magazine frequented by cadets, graduates of USAFA, and managed by a group of USAFA graduates who are now no longer in the Air Force. This monthly online magazine boasts a vast collection of comics and written columns, contributed by cadets and USAFA graduates, and a message board called *The Rumor Mill*, which is a gathering place for open discussion on any topic about USAFA. In one such discussion, cadets and graduates mocked the perceived weakness of female cadets and their performance on the Physical Fitness Test (PFT). One member of the message board was quick to illustrate his feelings about the weakness of female cadets (see Figure 1).

Female cadets were reluctant to report any type of harassment because they perceived that those reporting sexual harassment would encounter significant negative consequences (NSIAD, 1995). A victim who reported sexual harassment would be

Figure 1. Online comic that stereotypes women's performance on the PFT.<sup>1</sup>

PSYCHOLOGICAL TRAUMA FROM PEOPLE  
LAUGHING AT YOU WHEN YOU CAN'T DO ONE  
PULLUP ISN'T ENOUGH TO GET YOU  
EXCUSED. NOW TUCK IN THAT GUNT  
AND GO TAKE THE PFT.



<sup>1</sup>From [www.eDodo.org](http://www.eDodo.org), by PING!, November 2005. Copyright 2005 by eDodo Interactive, LLC.

viewed as a crybaby, be shunned by others, or receive lower military grades (NSIAD, 1995). About twenty-five of the fifty-nine allegations of sexual harassment at USAFA investigated by the Air Force Inspector General, in his report to the Secretary of the Air Force (Polk, 2004), were framed as reprisal against the complainant. The report found that many of the individuals in the assault and harassment reporting system allegedly reprisal against cadets who complained about harassment. Although victims of sexual harassment felt that they received negative consequences for reporting harassment, the Air Force Inspector General report only substantiated four of the fifty-nine allegations of harassment. Regardless of the Inspector General's findings, victims historically did not report, or were hesitant to report, incidents of harassment for fear of reprisal (NSIAD,

1995). Adding to the hostility toward women, one in five male cadets who responded to the Fall 2003 Superintendent's social climate assessment stated that women did not belong at USAFA.

Air Force Academy officials responded to the Walker report and Fowler Commission Report with the Agenda For Change, a blueprint for reversing years of institutional inaction and changing the culture that contributed to harassment and allegations of sexual assault. The leadership implemented changes that addressed the sexual assault scandals as well as the underlying values of the cadets and the Air Force Academy. The Agenda For Change generated over 120 distinct action items ranging from augmenting Basic Cadet Training with training on fair treatment and mutual respect to consolidating all sexual assault reporting into one office (Samuels & Samuels, 2003). The Agenda For Change specifically established policies and procedures for:

...improving the selection and training of Air Officers Commanding to ensure highly-qualified role models and leadership for male and female cadets; promulgating new rules and procedures to maintain dormitory safety and security; setting clearer mandates for cadets to conduct themselves according to the spirit of the Honor Code; requiring academic courses in leadership and character development as part of the core academic curriculum; and improving Basic Cadet Training to reemphasize fair treatment and mutual respect. (Fowler Commission Report, p. 14)

The Agenda For Change also required the replacement of personnel in the top leadership positions at USAFA as a result of years of inaction and failure to create and implement change in the Academy's environment. A new leadership team arrived, appointed for the



sole purpose of implementing and carrying out cultural change, which included Superintendent Lieutenant General John W. Rosa, Commandant of Cadets Brigadier General Johnny A. Weida, and Vice Commandant of Cadets Colonel Debra D. Gray. These new leaders worked to put the Academy back on track using the Agenda For Change to develop a new culture, military training, living environment and sexual harassment and assault reporting procedures.

Some changes employed by the Agenda For Change attempt to regulate cadets' behavior. One policy segregates the female cadet rooms near the women's restrooms to deter situations in which casual contact with male cadets could lead to inappropriate fraternization. Another policy of the Agenda For Change even details protocol for male and female cadet interaction within dorm rooms, stating,

No cadet will enter the room of another cadet of the opposite sex without knocking on the door and announcing themselves, and waiting for the door to be opened by the cadet occupying the room. Doors shall be fully opened at all times when a non-roommate or several non-roommates are present in the room. (HQ USAFA, 2003b, Cadet Life section, para. 5)

The Agenda For Change finally directs Air Force officers on the faculty and staff to police the cadet area every day, 24 hours a day, to monitor activity in the dorms, maintain dorm security, and keep good order and discipline. Other policy changes focus on guidelines for workplace behavior, including developing consistent Air Force definitions of assault and harassment, as well as emphasis on fair treatment and mutual respect. While having good intentions to try and reduce harassment of female cadets, these policies are only short-term fixes for deep-rooted problem in attitudes toward females.

Separating female cadets from male cadets, to try and reduce contact and the possibility of harassment, is merely avoiding the problem and side-stepping the issues of negative cadet attitudes toward women at the Academy. The training and education emphasis on fair treatment and mutual respect directly acknowledges issues of harassment and may improve attitudes toward women at USAFA.

One specific change, however, concentrates on a source of masculine attitudes that contributes to the hostile environment at the Academy. The Agenda For Change eliminated the Fourth-Class system, which was a ritual humiliation and degradation of the fourth-class cadets at the Academy. The Fourth-Class system was an adversative method very similar to life at VMI, which forced constant emotional and psychological stress upon the fourth-class cadets (Samuels & Samuels, 2003). Upon entering the Academy, fourth-class cadets endured a year of harassment and strict discipline at the hands of upper-class cadets who, at the end of the first year, *recognized* the fourth-class cadets based on the months of humiliation and discipline they went through. By enduring this humiliation, fourth-class cadets proved their masculinity to the upper three classes and were accepted into a long tradition of degradation. In its place, the Agenda For Change called for a Four Class System. While the Fourth-Class system focused on earning respect through humiliation and forced the fourth-class cadets to prove their masculinity by enduring harassment, the Four Class system focuses on the responsibilities of each class (Samuels & Samuels, 2003). The brutal system of punishments and persecution was replaced by mentorship and instruction in mutual respect, making a move toward eliminating attitudes of hostility and instead building a sense of teamwork and understanding.

## The Contact Hypothesis

The Four Class system focused on teamwork and mutual respect to bring a sense of cohesion to the cadets at USAFA. This system also eliminated forms of harassment and instead reinforced modes of intergroup contact. In *The Nature of Prejudice*, Gordon Allport (1954) developed basic principles of the contact hypothesis and specified critical situational conditions for intergroup contact to reduce prejudice (Pettigrew, 1998). Dick et al. (2004) found that by bringing groups into contact under certain conditions, contact is an effective way to reduce intergroup tension, anxiety, and hostility. Allport's contact hypothesis theory specified four conditions for optimal intergroup contact that reduced bias successfully: 1) support from authorities, law, or custom; 2) common goals; 3) intergroup cooperation; and 4) equal status within the contact situation (Pettigrew, 1998). Expanding on these points, Pettigrew explains that intergroup contact is accepted readily and has more positive effects with explicit social sanction from sources of authority. Common goal-oriented efforts, such as an athletic team trying to win a game, further the process of prejudice reduction through contact. People on an athletic team may initially hold prejudices against other team members, but the goal of victory makes teamwork essential and ultimately helps reduce prejudice through this common goal. Attainment of common goals must happen without intergroup competition and is accurately demonstrated, for example, in the jigsaw classroom technique, which "...structures classrooms so that students strive cooperatively for common goals (Aronson & Patnoe 1997)" (Pettigrew, 1998, p. 67). Finally, "Allport stressed equal group status *within* the situation" (Pettigrew, 1998, p. 66).

When President Harry S. Truman ordered the racial integration of the armed forces in 1948, many whites and blacks opposed the integration efforts (Wojack, 2002). Whites argued black soldiers were unreliable and careless, and blacks maintained they would not get fair treatment in integrated units (Wojack, 2002). Wojack found that after integration, complaints of racism and unfair treatment decreased in integrated units. Several other studies (Singer, 1948; Stouffer, 1949; Brophy, 1946) concluded white soldiers and seamen who had integrated combat experiences with blacks had more positive racial attitudes than those who did not have this contact. Beyond the military, Dovidio, Gaertner, and Kawakami (2003) found evidence that appropriate intergroup contact reduced bias across a range of minority groups including homosexuals, people with psychiatric disorders, as well as racial and ethnic minorities.

Durning's (1978) study of attitudes at USNA showed that regular contact between male and female cadets helped increase egalitarian views of women. Durning (1978) administered surveys, which included questions on the roles of men and women in society and in the military, to USNA midshipmen in the Class of 1980 and found that contact over five months of integration had a significant effect on decreasing negative attitudes and increasing egalitarianism. At USMA, contact between male and female West Point cadets reduced male cadets' negative preconceptions of female cadets (Diamond & Kimmel, 2002). Finally, DeFleur et al. (1985) found that male cadets at USAFA who interacted more with female cadets held less traditional attitudes about women in societal roles and reduced negative preconceptions of female cadets. The contact hypothesis is not relevant to gender relations in society outside the military academies since there is almost constant contact between men and women. In the context

of military academies, the contact hypothesis is relevant and makes sense in an environment where females gained admission only recently.

### **The Contact Hypothesis at USAFA**

Pettigrew (1998) states that prejudiced people may avoid contact with other groups, however, by limiting the choice to participate in intergroup situations, contact leads to positive results. For example, in a school recess environment, a teacher can limit a student's choice to participate in a group activity by simply assigning teams and involving everyone so that no one is left out of the activity. Cadets at USAFA have no choice but to participate in intergroup situations on a daily basis because USAFA is a total institution in which all aspects of cadet life are integrated into a closed system. Further, intergroup contact, in line with Allport's four prerequisites, helps dissolve stereotypes and increase favorable sentiment. For the most part, cadets at USAFA experience reductions in negative attitudes and stereotypes through intergroup contact (DeFleur et al., 1985). Unfortunately, if contact is poorly arranged or the prerequisites are violated, contact between people can build upon stereotypes and prejudice (Pettigrew, 1998).

*Support from authorities, law or custom.* Academy leadership explicitly sanctions intergroup contact through policies such as the Agenda For Change, which details male and female interaction from living arrangements to military training activities. Female cadets have trained and studied alongside male cadets since women first arrived at USAFA. These written and customary rules and policies, created and supported by the Academy leadership, establish norms of acceptance in the cadet wing. After the top leadership positions were replaced, as directed by the Agenda For Change, the new

leadership team did not hesitate to vocally express their support for the changes and policies regarding positive male-female interactions. Unfortunately, the Agenda For Change also has a policy that segregates female cadet dorm rooms away from male cadet dorm rooms to deter inappropriate situations. Instead of attempting to avoid the problems associated with contact, USAFA leadership should stress and support all types of contact for positive results

*Common goals.* In striving to endure and graduate the Academy experience, especially during the fourth-class year, male and female cadets have always come together within their own squadrons (a group of about 100 cadets) in active, goal-oriented efforts to achieve these common goals. Male and female cadets also graduate and enter the active duty Air Force with the same jobs such as fighter pilots, scientists, and engineers. Now that women in the Air Force are no longer excluded from flying fighter aircraft, which is a central task of the U.S. Air Force, they share a common fate with their male counterparts (DeFleur et al., 1985). The struggle toward common goals requires people within a group to cooperate and work together to achieve the goals. In some cases, on a lower level than graduation and careers in the Air Force, cadets do not share common goals. Some cadets focus on competing for a specific military position within a squadron while others concentrate on achieving academic success or physical fitness success. Although these different minor goals exist for many cadets, the ultimate objective common to all cadets is graduation and careers as Air Force officers.

*Intergroup cooperation.* DeFleur et al. (1985) found that in a military environment, specifically at USAFA, most interaction is formally structured according to particular tasks and specific roles that depend on cooperation. For example, academic

workgroups and military training staff are two areas that are formally structured and depend upon cooperation between its members. It is more difficult to exhibit discriminatory behavior based upon prejudicial attitudes in structured interaction than in informal settings. Beyond these structured cooperative interactions, however, the Academy fosters an extremely competitive environment in informal settings where cadets compare themselves to each other as they vie for respect among peers. This competition is not conducive to reducing negative stereotypes of women. With annual training events such as Operation Phoenix, the Academy leadership can continue to place more emphasis on promoting a cooperative rather than competitive atmosphere between cadets to reduce stereotyping. Cooperative activities during Operation Phoenix included group runs to build teamwork and squadron unity, Field Day team sports events, and a Team Attribute course which required teamwork and collective problem-solving skills (Weida, 2003).

*Equal status.* Based on selection criteria outlined on the Academy Admissions website at [www.academyadmission.com](http://www.academyadmission.com), similar admission standards for USAFA allow for an objective equal status even before cadets arrive for the first day of basic training. When fourth-class cadets first arrive to begin training at USAFA, male and female cadets receive the same rank, clothing, and equipment. During their entire first year at USAFA, male and female cadets are at an equal status level –nothing distinguishes male and female cadets. Even for upper class cadets, male and female cadets do not differ. With the same uniforms, dorm rooms, academic classes and military training, male and female cadets share almost equal status within the realm of USAFA.

In addition to uniforms, dorms, and class rank, standards for male and female cadets are the same in the academic, military, and character pillars of USAFA; however,

of the four major pillars of USAFA, differences in standards are obvious in the Academy's pillar of physical fitness. The military academies have maintained systems of equivalent or gender-normed training, using different standards for male and female cadets, but have experienced grumbling from male cadets who felt equitable training standards established lower and easier standards for women (Diamond & Kimmel, 2002). Male cadets at West Point and Annapolis believed male and female cadets would be equal only when physical fitness standards were equal (Diamond & Kimmel, 2002; Durning, 1978). According to DeFleur et al. (1985), USAFA cadets said integration was most difficult in the area of physical performance due to perceived behavior compatible with stereotypes. In early experiences with physical performance at USAFA, females were not as prepared physically for the demanding, aggressive and physical training. Their performance supported the common stereotypes of weakness and inability for strenuous physical activity (DeFleur et al., 1985).

### **Physical Fitness Tests**

VMI administrators developed their first physical fitness test in the mid-1980s to challenge each cadet's limits (Brodie, 2000). According to Brodie (2000), the Physical Education Department at VMI consulted with fitness experts and studied the fitness tests at the federal service academies and ultimately created a test that included pull-ups, push-ups, sit-ups, and a three-mile run. VMI shortened its physical fitness test in 1997, by eliminating push-ups and reducing the run to one-and-a-half miles, so that it could be administered during one class period. Since the assimilation of women in 1997, the Virginia Military Institute (VMI) has used the exact same physical fitness testing standards for male and female cadets. Their policy of gender assimilation assumes that



women's equality means the strictest adherence to exactly the same treatment in all aspects of cadet life (Diamond & Kimmel, 2004). In the eyes of Josiah Bunting, VMI's Superintendent at the time of gender assimilation, women deserved equal treatment if they were coming to VMI. Unfortunately, equal treatment meant that VMI would treat male and female cadets equally in all aspects of cadet life. VMI changed neither its curriculum nor physical fitness test standards in order to maintain strict adherence to a policy of exact same treatment for all cadets. VMI wanted to avoid double standards that would antagonize male cadets (Brodie, 2000). The minimum and maximum standards for male and female cadets at VMI are exactly the same (see Table 1). While VMI's single physical fitness standard may appear gender neutral, it is, in fact, based on a standard developed by men for male cadets (Kimmel, 2004). Michael Kimmel argues that male standards become the standard of analysis, with women evaluated only in relation to men. He found that VMI cadets favored gender assimilation over gender equity, and male cadets took the position that they don't lower the standard for anybody. Unfortunately, this assimilation in physical fitness testing sets women up to fail since the test is geared to male physical attributes, such as upper body strength. According to Thomas et al. (1975), females have poorer strength to weight ratios specifically in the upper body distribution due to a body composition of 25% adipose tissue (subcutaneous fat and deep storage fat) compared to 15% adipose tissue in men. Since adipose tissue does not contract or aid the body in movement, and is considered dead weight, it is a handicap in some physical activities that require strength (Thomas et al., 1975). The male VMI cadets view equality as sameness yet do not realize that by ignoring salient

differences between men and women, they support a form of discrimination against women (Kimmel, 2000).

Table 1

*Minimum and Maximum Limits For Physical Fitness Tests*

Cadets	Minimum		Maximum	
	Male	Female	Male	Female
VMI				
Pull-ups	5	5	20	20
Sit-ups	60	60	92	92
1.5 Mile Run	12:00	12:00	8:00	8:00
USAFA				
Pull-ups	7	1	21	8
Long Jump	7'00"	5'09"	8'08"	7'02"
Sit-ups	58	58	95	95
Push-ups	35	18	72	48
600 Yard Run	2:03	2:23	1:35	1:53
1.5 Mile Run <sup>a</sup>	12:21-25 <sup>b</sup>	14:14-17	7:45	8:55

*Note.* Values for the runs are in minutes.

<sup>a</sup>The 1.5 Mile Run for USAFA is called the Aerobic Fitness Test (AFT). Cadets take this test separately, on a different day, from the Physical Fitness Test (PFT). <sup>b</sup>The minimum requirement is between 12:21 and 12:25 minutes.

Unlike VMI's policy of gender assimilation and equality based on sameness, the military academies integrated females into their ranks in 1976 under policies that acknowledged physical gender differences. Prior to the admission of women at USAFA, the Academy's Department of Physical Education worked to determine physiological differences between male and female cadets and make any adjustments to the physical fitness tests (Baldi, 1991). USAFA created the Women's Integration Research Project (1976) to smoothly incorporate women into the Academy's fitness programs. In January 1979, USAFA recruited 15 junior Air Force officers who endured 4 years worth of

physical and military training in one semester for a fitness evaluation and test of overall performance (Baldi, 1991). In addition to their role as research participants, these junior female officers served as role models for the incoming female cadets arriving that August. According to Baldi, these research participants accomplished the physical fitness tests at the 75<sup>th</sup> percentile for women nationally and these women performed much better than women in the general population on subsequent testing.

Upon completion of the Women's Integration Research Project, the USAFA Department of Physical Education established equitable physical fitness standards based on the initial results and the physiological differences of male and female cadets. The PFT measures upper body strength with pull-ups and push-ups, explosive power with the standing long jump, abdominal strength with sit-ups, and speed and anaerobic fitness with the 600 yard run. Due to time constraints, the Aerobic Fitness Test (AFT), which measures cardiovascular fitness, is administered during another class period. Over the years, improvements in cadets' PFT performance necessitated improvements in standards. Due to pronounced improvements by female cadets in the sit-up event, the PFT adopted the same sit-up standards for male and female cadets (Petosa, 1989). Petosa (1989) found that when women first entered USAFA, they averaged seven fewer sit-ups than men; however, significant improvements in sit-ups by women resulted in men averaging seven fewer sit-ups than women. Although Petosa's regression analysis of performance on sit-ups showed that females performed better on sit-ups than males, the standards remained the same for both males and females. Table 1 shows the current physical fitness minimum and maximum limits for male and female cadets at USAFA.

Baldi (1991) noted that further research supported these gender-normed scales; one of the earliest studies on female cadets at USAFA measured the percentage of body fat and maximal oxygen intake of the first class of women. The female cadets were within a range of normal body fat for college-age women, but the  $\text{VO}_2$  max (the maximum volume of oxygen that a person can metabolize during exercise) was well above the average for college-age women. At a higher level of oxygen consumption, the heart will work less for a given workload (Thomas et al., 1976). Baldi collected physical performance data from USAFA and USMA and found that female cadets performed at levels approximately 8% less than male cadets. Petosa (1989) declared that compared with men, women have a smaller heart, less muscle mass, a higher percent of body fat, lower oxygen-carrying capacity, lung capacity,  $\text{VO}_2$  max, and basal metabolic rate. Female cadets who decided to attend military academies were already a fairly select group compared to college-age women, but still performed at levels lower than their male counterparts due to these physiological differences. According to Wojack (2002), an average American woman is 4 inches shorter than the average man and 40 pounds lighter. They have 6.5 to 13 pounds more body fat than men and from 40-48 pounds less lean body mass, or muscle weight (Wojack, 2002). Wojack also found that women have about one-tenth the amount of testosterone, a crucial hormone in strength development, as men.

During every semester at USAFA, all cadets report to the Field House (an indoor track and Astroturf area) and take the Physical Fitness Test (PFT) side by side. Since male and female cadets are not segregated during testing, differences in physical ability and standards become apparent. For example, a male cadet who accomplishes the male

minimum standards on the PFT will receive a score of 125, or an F letter grade. A female cadet who performs exactly the same as the male cadet will receive a score of 342, or a C letter grade. A female cadet who runs the Aerobic Fitness Test (AFT) in 14 minutes and 2 seconds receives a passing score of 215, while a male cadet with the same finishing time fails the AFT with 0 points. While the numbers conflict and cadets see that male and female cadets perform at different levels, physical fitness and well-being are not the first things cadets think about when faced with this disparity. These differences in scoring are based on the male and female physiology, but without this information cadets only see differences in numbers and scoring. Even though the differences in scoring are based on differences in physiology, the fitness standards still reflect a point-based testing system based on male body strength. For example, female cadets have performed better than male cadets in sit-ups but male cadets do not have different expectations in this area.

In her study of women at the Naval Academy, Durning (1978) stated that it is crucial to have a rational and fair basis for considering aptitude differences in physical fitness standards. She recommended a well-reasoned, equitable system explained to midshipmen in advance to prevent accusation of favoritism and negative attitudes. No advance explanation is provided to cadets on the equitable, but not equal, nature of the physical fitness tests. Some cadets may believe these differences exist to accommodate the fact that females are weaker than males. A few cadets may understand the equitable nature of the physical fitness tests, which are backed by scientific research and testing, but they probably do not vocalize this information to the rest of their classmates.

### **Equality and Equity: Sameness and Difference**

VMI adopted a policy of assimilation and equality whereas USAFA approached gender issues with a policy of integration and equity. Kimmel describes the assimilation of women at VMI as a matter of discrimination, which is ignoring sameness when it is salient and ignoring difference when it is salient (Kimmel, 2000b). According to Kimmel, people discriminate by treating those who are the same as if they were different and treating those who are different as if they were the same. Most sex and race discrimination in the workplace and higher education occurs when people treat sameness differently; people cannot treat similar people as if they were different (Kimmel, 2000b). For example, *Brown v. Board of Education* struck down the separate but equal logic because separate cannot be equal (Kimmel, 2000b). You cannot treat black students and white students, who have the same propensity for academic achievement, as if they were different by providing racially segregated academic facilities. In addition, people cannot treat those who are different as if they were the same. In sexual harassment cases, for example, the traditional standard of harassment – Would a reasonable person find the behavior objectionable? – has been replaced by a “reasonable woman standard” (Kimmel, 2000b). Kimmel stated that “there are some differences between men and women...the question has become not whether some abstract person would find it objectionable but whether a woman would find it so” (Kimmel, 2000b, p. 497).

Based on these two means of discrimination, female cadets constantly negotiate sameness and difference with each other, male cadets, faculty and staff, and themselves, part of what Kimmel (2000b) calls “doing gender.” For example, female cadets at VMI tried to fit in with their male classmates by cutting their hair short and refusing to wear

makeup (Diamond & Kimmel, 2002). Diamond and Kimmel found that although female cadets tried to fit in this way, male cadets were quick to point out that now the females looked different from women outside of VMI. In the eyes of the male cadets, the female cadets who tried to be the same still were different from the males. In addition, when females stress difference from males, they are treated the same as males. For example, many male cadets at VMI resented and criticized female cadets who desired to be different in any way (Diamond & Kimmel, 2002). In the traditionally masculine military, women are constantly negotiating the meanings of femininity using techniques that Kimmel (2000b) describes as gender strategies. The first strategy is emphatic sameness, which involves downplaying gender identity as women in favor of being seen only as cadets. As long as female cadets are not seen as women, they could be seen as successful cadets. The second gender strategy is strategic overcompensation, which is the belief that female cadets have to work twice as hard to remain equal to the male cadets. Third, informal networks of support exist so female cadets have mentors and role models in other members of the military who are female. Finally, female cadets negotiate their femininity through selective displays of gender; female cadets openly declare their traditional femininity in social situations through use of make-up and the wearing of dresses while downplaying gender in professional situations. In order to survive and succeed in the traditionally masculine military academies, female cadets adapted by blending in, not standing out (Diamond & Kimmel, 2004).

Kendrigan (2003) states that confusion over the meaning of equality has made it easier to increase existing inequalities often in the name of equality. According to Kendrigan, if we increase our understanding of equality, rather than trying to achieve an

absolute equality, we are able to evaluate efforts toward greater equality. Since existing inequalities are so vast and abstract, Kendrigan (2003) states that the meaning of equality is also abstract. By investigating how we can achieve greater equality in certain situations, we are able to contextualize equality and move toward greater equality. Kendrigan asks that we not base efforts to treat people equally on the false assumption that equal treatment requires that we ignore all differences. Society should not simply treat women like men, but also be clear that gender equality requires different treatment only when it provides movement toward greater equality. Instead of ignoring claims of differences in hopes of avoiding their dangers, we must ask in what ways gender differences should be considered in order to create more equality (Kendrigan, 2003).

### **Why Physical Fitness Testing Fails**

The confirmation bias, a phenomenon documented by Wason (1960), illustrated that people systematically sought evidence to confirm rather than deny their beliefs. The confirmation bias may be the root of self-perpetuating and self-fulfilling beliefs in society, especially when dealing with members of another race or someone of the opposite sex. According to the confirmation bias, people incessantly look for evidence supporting stereotypes that confirm their own beliefs about, for example, the physical capabilities of women. Although VMI and USAFA have two unique approaches to physical fitness testing, male cadets at both institutions constantly seek support for their beliefs that female cadets are not good enough and do not belong.

The VMI physical fitness test treats different people the same. Male and female cadets take the same physical fitness test and receive grades from the same scale of performance which set female cadets up for failure. In the eyes of the male cadets,



female cadets need to be the same as men in order to be good enough (Diamond & Kimmel, 2004). Female cadets also have a higher failure rate on the physical fitness test, which is enough evidence for male cadets to prove the inferiority of women (Brodie, 2000). Also, male VMI cadets believe if women tried harder they could meet the standards, but they do not consider that the standards were created by males based on the physical attributes of males (Brodie, 2000). If male and female VMI cadets abide by the same standards and females do not perform as well as men, male cadets see this disparity in ability and use this evidence to confirm their prejudices that women are weak and inferior to men.

The physical fitness standards of the USAFA physical fitness test show that males and females are different. This difference in physiology and the need for separate physical fitness standards reinforces stereotypes of difference between male and female cadets. Male cadets may interpret this disparity in standards as favoritism toward females or a weakness of the female body, which result in resentment toward females. This resentment may also come from the male cadets' beliefs that female cadets are not as capable as male cadets, which may result in the belief that women do not belong at USAFA. Male cadets believe female cadets receive special treatment and that they need lower standards to compensate for weakness (Diamond & Kimmel, 2004; Durning, 1978). Diamond and Kimmel (2004) also found that female cadets who did perform well were criticized for making all female cadets look bad. VMI and USAFA approach physical fitness testing differently but end up reinforcing the same prejudiced beliefs about women.

Ultimately, physical fitness testing exists at USAFA and in the U.S. Air Force to encourage and measure physical fitness of its members. According to Baldi (1991), the

purpose of physical fitness, as well as academic and military training, is to "...prepare each cadet for the demands of being an officer and to instill confidence, self-discipline, and an understanding of the importance of teamwork" (p. 537). General John P. Jumper, the Chief of Staff of the Air Force, communicated his vision of a more physically fit Air Force capable of handling the daily rigors associated with the mission of the U.S. Air Force. In his first message about physical fitness, General Jumper (2003) recognized the need for an improvement in the physical fitness of Air Force members. In a follow-up message, General Jumper (2004) stressed the importance of physical fitness as a part of the professional image of members of the Air Force. Unfortunately, USAFA does not provide an official explanation to cadets about the gender-normed standards of the physical fitness tests and why physical fitness tests differ from job-related fitness tests. There are no standards of combat that state ten pull-ups will save your life and nine pull-ups will kill you. Reaching 7 ft on the long jump won't accomplish the mission better than 7 ft and 5 in. These standards are not job-related but ensure physiologically based physical fitness levels for the average male or female cadet. Physical fitness is important to the Air Force and to USAFA; however, cadets do not receive this message or fail to understand it.

Although general physical fitness tests exist to measure and ensure physical fitness levels, job-related tests also exist to measure and ensure the readiness of Air Force members in specific occupations. Air Education and Training Command Instruction 11-406 outlines the Fighter Aircrew Conditioning Program (FACP) and the Fighter Aircrew Conditioning Test (FACT), which determine "...an individual's muscle fitness as it applies to operating high-G aircraft....Anaerobic fitness (muscle strength and endurance)

is essential to performing effective anti-G straining maneuvers without fatigue” (HQ AETC, 2000, p. 2). The FACP exists to improve the G-tolerance, G-endurance, and cockpit strength of fighter aircrews who must endure a high stress environment that requires muscular strength and endurance. The FACT contains exercise events, such as arm curls, bench press, leg press, push-ups, and crunches, which require a certain minimum number of repetitions. Weight limits for each exercise are set based on a percentage of each individual’s body weight, because the gravitational forces during aircraft maneuvers are dependent on weight and unique to each person; gravity does not discriminate between males or females or race but relies on the weight of an individual in the cockpit.

The VMI model of gender assimilation and USAFA model of gender integration falls short of complete acceptance of women because the standard itself is never questioned. Women are expected either to measure up to pre-existing standards created by and for men or to justify accommodations made for biologically based differences without an understanding of why standards are in place (Diamond & Kimmel, 2004). Cadets hold certain views on the assimilation and integration of women based on what they see every day and hear about each other. If cadets are simply told to integrate and assimilate without any explanation or education on the differences and similarities between males and females, they have no supporting evidence or instructions to follow except for their own opinions. This is especially important because, according to DeFleur et al. (1985), the physical fitness standard is one of the main areas where male cadets hold the most resentment toward female cadets without much evidence to support their opinions. Since USAFA cadets do not receive guidance on the benefits of physical

fitness testing, as a measure of overall well-being and fitness, they look for reasons on their own why the different standards exist. When cadets start looking past the real reason behind fitness testing and come up with evidence that supports stereotypes and prejudices, physical fitness testing fails.

### **Conclusion**

Samuels and Samuels (2003) stated that all members of the integrating academies were ordered by the leadership that integration would occur, and it would go smoothly, yet if the members refused to accept the integration it would be far from smooth. Without major changes to the culture and training at USAFA, gender integration will continue to meet opposition from male cadets who espouse traditional gender roles and beliefs. Support from leadership and administration plays a vital role in shaping the opinions of cadets, as evidenced by opinions at VMI regarding equal physical fitness standards. A member of VMI leadership declared that,

[VMI leadership] should get the female cadets to take that mindset...prouder of taking a C than getting an A by a different set of standards....There's nothing to really be proud of if you're not evaluated by the same standards. (Brodie, 2000, p. 153)

Another member of the VMI administration stated,

I believe that if a woman works hard enough at accomplishing pull-ups, she can do it....I think women have been told for so long that they have weak upper-body strength, and they can't do pull-ups like men, that they believe it in their own minds. I think that's part of the problem. (Brodie, 2000, p. 154)

With such overt support of equal fitness standards by the leadership, VMI cadets more readily concur with the standards. One female cadet, who preferred the single physical fitness standard said,

They're trying to adjust it to female standards....You do that and that's gonna single us out even more. That's gonna make us look even weaker. And the male cadets are just gonna resent us even more. We don't need that. So you might as well just keep the standard. Keep it straight across the board. (Diamond & Kimmel, 2002, p. 177)

Unfortunately, the continued support of equal standards at VMI perpetuates prejudice and discrimination against women. In the face of research supporting physiological differences in males and females, and physical fitness standards based on maintaining a healthy and fit force, equal standards only lead to failure for women. Equal standards for men and women make as much sense as equal standards for a twenty-two year old lieutenant and a fifty year old general. In addition to different standards for males and females, the active duty Air Force physical fitness standards take age into consideration and lower standards for males and females as age increases. Age categories for the Air Force fitness test include those less than 25 years of age, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, and 55 years old and over. Some older individuals may be able to achieve the standards set for younger individuals, but older people in general are not as physically able as young people. The active duty members of the armed services use physical fitness standards based on gender and age, while military academy cadets and VMI use standards based only on gender. The leadership at VMI espouses equality and stands

firm on their views of women, which carry over to the cadets and continue a tradition of discrimination against women.

Unlike the administration at VMI, the administration at USAFA does not explicitly support the gender-normed standards or explain the standards in official documents. Several official USAFA instructions on physical fitness testing (Ararta, n.d.; HQ USAFA, n.d.; HQ USAFA, 2005) only outline general instructions on how to conduct and grade each exercise but do not mention or explain the gender-normed physical fitness standards. If USAFA leadership openly supported equitable gender-normed standards, through briefings and official USAFA Instructions, cadets would acknowledge the support of the standards by authority figures. Policy changes in physical fitness testing could also reflect individualized standards that account for gender, age, weight, and body type. If authority figures also acknowledge that there are some areas where women have more strength, such as sit-ups, notions of female inferiority will be invalidated and cadets may begin to think of the connection between different physical fitness test standards and physiological differences. Attitudes toward women may improve once cadets receive education on the reasons behind the physical fitness testing standards and why they are or are not important based on job-related fitness or personal fitness.

## CHAPTER II

### METHOD

#### Participants

Forty-one cadets from the Air Force Academy Department of Behavioral Sciences and Leadership (DFBL) research participant pool volunteered to participate in the study. Ten cadets from the BehSci100 course (*An Introduction to Behavioral Sciences*) and thirty-one cadets from the Fall BehSci310 course (*Foundations for Leadership and Character*), for a total of forty-one cadets, participated in this study. For the purpose of recruiting test participants, cadets were offered the opportunity for an increase of 1% in their final course grade in BehSci110 or BehSci310 if they participated in this study. Volunteers who participated in the study were treated in accordance with the "Ethical Principles of Psychologists and Code of Conduct" (American Psychological Association, 2002).

There were 780 female cadets (approximately 18%) and 4363 total cadets at USAFA as of 15 October 2005.

Table 2

*Current Strength of Cadet Wing (15 October 2005)*

Class	Male	Female	Total
2005	753 (82.39%)	161 (17.61%)	914
2006	726 (81.39%)	166 (18.61%)	892
2007	838 (82.32%)	180 (17.68%)	1018
2008	949 (81.53%)	215 (18.47%)	1164
2009	1070 (83.01%)	219 (16.99%)	1289

*Note.* Current Cadet Wing strength does not include Class of 2005.

Survey respondents were 78% male ( $n = 32$ ) and 22% female ( $n = 9$ ). Of those who reported their class year, six (14.6%) identified as class of 2006, eighteen (43.9%) identified as class of 2007, eleven (26.8%) identified as class of 2008, and six (14.6%) identified as class of 2009.

### **Instrument**

Participants completed a 31-item survey entitled Understanding Attitudes on Gender and Training at the United States Air Force Academy. Items 1 to 8 are the Modern Sexism Scale (MSS) developed by Swim, Aikin, Hall, and Hunter (1995), items 9-12 and items 19 to 23 are measures developed from a survey of attitudes toward women at the United States Naval Academy (Durning, 1978), items 13 to 18 are questions from the General Social Survey regarding women in the military (2000), items 24 to 29 are questions that measure understanding and/or perceptions of differences in standards at USAFA, and items 30 and 31 record gender and class year.

*MSS.* The MSS (Swim et al., 1995) is an 8-item instrument that measures covert or subtle forms of sexism that are hidden because they are built into cultural and societal norms. The best known and most often used scale for measuring overt sexist beliefs toward women is Spence, Helmreich, and Stapp's (1973) Attitudes Toward Women Scale (AWS); however, Swim et al. stressed the difficulty of measuring overt prejudicial beliefs due to the presence of strong normative pressures not to endorse blatantly prejudicial remarks. Swim and Cohen (1997) found that changes in responses to the AWS over the years suggested a decline of at least overt endorsement of sexist beliefs so they supported the MSS as a better predictor of sexist behavior than older scales that measured attitudes toward women. The obsolescence of the terminology is one reason the MSS is favored



over the AWS; the AWS contains obsolete questions and unfamiliar vocabulary that were only pertinent decades ago, including a question about a woman running a locomotive and a man who darns socks. Each item has a 7-point Likert scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree) that measures levels of agreement or disagreement to statements about the roles of women in society. Due to the design of the survey, items 1, 4 and 8 require reverse scoring. High scores show sexist beliefs that reflect insensitivity to gender inequality and more traditional beliefs about women (Swim et al., 1995). For analysis in SPSS, the MSS items were reversed so that low scores reflect more sexist attitudes.

GSS. The General Social Survey is a personal interview survey of households in the United States conducted annually between 1972 and 1994 (except for 1979, 1981, and 1992) and biennially thereafter by the National Opinion Research Center (NORC) with Davis, Smith, and Marsden (2000) as principal investigators. The cumulative codebook from 1972 to 2000 included 38,116 English-speaking persons 18 years of age or older, living in non-institutional arrangements within the United States. The interview schedules varied by year and generally contained numerous items on demographics, happiness and satisfaction, attitudes toward government spending, government policies, assistance programs, taxes, and satisfaction with institutions. I used entries from the 1972 to 2000 cumulative codebook data to examine beliefs about females in the military and their role in specific military jobs. Each item has a 7-point Likert scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree) that measures levels of disagreement or agreement to statements about the roles of women in the military. Low scores reflect more sexist attitudes.

*Naval Academy Survey on Attitudes.* Items 9 to 12 and 19 to 23 in this survey are from a groundbreaking study on attitudes of the Class of 1980 cadets at the United States Naval Academy (Durning, 1978). Durning assessed opinions about men and women in the military, more specifically about egalitarian views of women in the military and at the Naval Academy. Due to the design of the survey, items 10 and 12 require reverse scoring. Items 9 to 12 have a 7-point Likert scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree) that measure levels of disagreement or agreement to statements about the roles of women in the military, specifically the roles of women in combat. Items 19 to 23 have a 5-point Likert scale ranging from 5 (Large Negative Impact) to 1 (Large Positive Impact) that measure views regarding the impact of female cadets on standards, discipline, overall image, and pride at the Air Force Academy. Low scores reflect more sexist attitudes.

*Standards of Performance.* In her study, Durning (1978) recommended that the Naval Academy explain the equitable physical fitness standards to midshipmen in advance to prevent accusations of favoritism and negative attitudes toward women. I created items to measure understanding of academic, military, and physical fitness standards at the Air Force Academy to see if cadets are aware of differences in standards and why differences in standards exist. Items 24 to 29 are tailored specifically for this survey and the population of cadets at USAFA. I used these types of questions and requested comments in order to give the participants opportunities to express their answers in their own words. Due to the anonymity of the survey, I expect that cadets will freely express their genuine opinions about standards at USAFA. Items 24 to 26 ask participants if male and female cadets have different standards for academic, military,

and physical fitness performance. If the participant agrees there are different standards, they are to comment further and explain their answer. Items 27 to 29 ask participants if they think there should be different standards in academic, military, and physical fitness performance. If the participant agrees there should be different standards, they are to explain their answer in detail.

In addition to these items, participants were asked their sex and rank and also provided space for any further comments.

### **Procedure**

During the 2005 Fall semester, cadets in the DFBL research participant pool were invited to participate in this study. Participants reported to a lecture room in Fairchild Hall (the USAFA academic building) at their designated testing period and sat in a chair at a desk. I read the survey instructions and encouraged the participants to complete the survey but also stated that completion of the survey was completely voluntary. In addition, I informed the participants that there were no negative consequences for not completing the survey, only I would see individual responses, and the survey was completely anonymous. Each participant needed one session of approximately 10-15 minutes to complete a survey. Total participation time was about 30 minutes including the introduction, instructions, survey, and debriefing of the research.

To investigate the first hypothesis, I will use an analysis of variance to determine the effects of one independent variable, gender, on several dependent variables, which include sexist attitudes toward women in society, the roles of women in combat, women and certain military jobs, and impact of female cadets at USAFA. To examine the second hypothesis, I will use content analysis of written comments in order to determine if male

cadets believe female cadets have a negative impact on physical fitness standards at USAFA. For the third hypothesis, I will use logistic regression to identify combinations of independent variables that best predict the support of equal or equitable physical fitness standards. Correlations will help identify which combinations of independent variables tend to cohere regarding opinions of physical fitness standards. Figure 2 is a visual model that outlines the hypotheses and path of analysis.

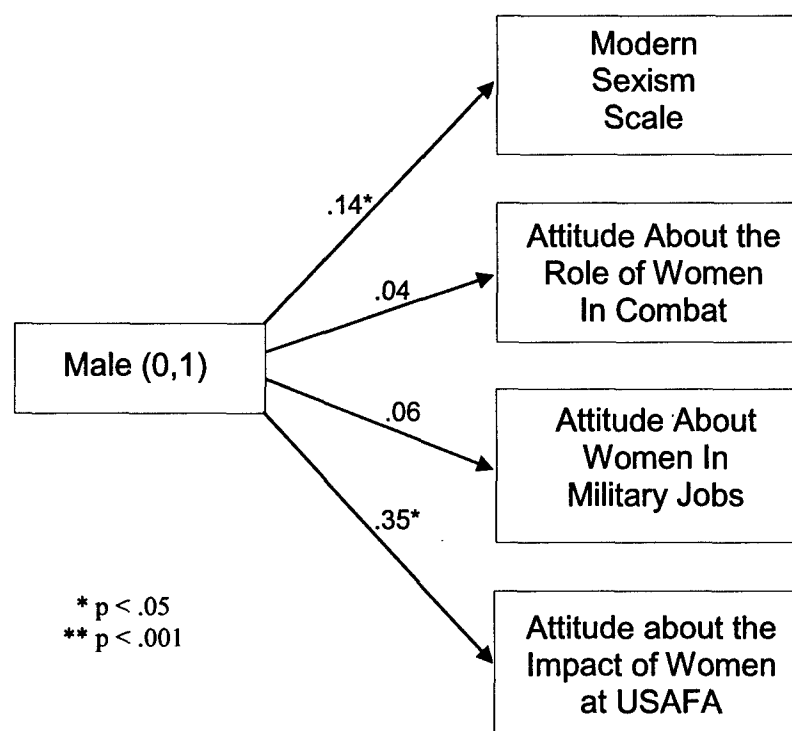


Figure 2. Overall model of research hypotheses with numbers showing statistical association and level of significance between the variables in the analysis.

## CHAPTER III

### RESULTS

#### **Attitudes of Male and Female Cadets Toward Women Regarding Roles in Society, Combat Roles, Military Jobs, and Impact at USAFA**

Analysis of male and female cadets' attitudes toward women was conducted with an analysis of variance (See Table 3). Lower scores reflect higher sexist attitudes. The results on the MSS revealed that male cadets held higher sexist attitudes ( $M = 32.06$ ,  $SD = 5.44$ ) than females ( $M = 36.89$ ,  $SD = 4.88$ ). The difference was statistically significant, ( $F_{1,41} = 5.21$ ,  $p < .05$ ). Male cadets held more sexist attitudes about the role of women in combat ( $M = 15.16$ ,  $SD = 5.51$ ) and jobs in the military ( $M = 33.19$ ,  $SD = 5.46$ ) than females ( $M = 17.56$ ,  $SD = 5.08$ ;  $M = 36.56$ ,  $SD = 3.78$ ); however, these differences were not statistically significant ( $F_{1,41} = 1.27$ ,  $p = .27$ ;  $F_{1,41} = 1.91$ ,  $p = .18$ ). Male cadets also believed female cadets had a more negative impact at USAFA ( $M = 16.13$ ,  $SD = 3.38$ ) than females ( $M = 20.00$ ,  $SD = 3.28$ ). This difference was statistically significant ( $F_{1,41} = 17.42$ ,  $p < .001$ ).

The statistical association was small for the effect of gender on the MSS ( $\eta^2 = .14$ ), the association was very small for the effect of gender on attitudes about the role of women in combat ( $\eta^2 = .04$ ), the association was very small for the effect of gender on jobs for women in the military ( $\eta^2 = .06$ ), and the association was large for the effect of gender on the impact of female cadets at USAFA ( $\eta^2 = .35$ ). The pattern of means showed that males held high sexist attitudes toward women, did not agree with the involvement of women in combat, did not agree with women holding certain jobs in the military (such as a soldier in hand-to-hand combat), and believed women have a negative

impact at USAFA (See Table 3). Eta-squared, or  $\eta^2$ , is the variance in each dependent variable explained by gender.

Table 3

*Analysis of Variance of Levels of Sexism by Gender*

	gender	Mean	Std. Deviation	N
MSS	male	32.0625	5.44140	32
	female	36.8889	4.88478	9
	Total	33.1220	5.64001	41
Roles of women in combat	male	15.1563	5.51309	32
	female	17.5556	5.07718	9
	Total	15.6829	5.45178	41
Women and military jobs	male	33.1875	5.45620	32
	female	36.5556	3.77859	9
	Total	33.9268	5.28389	41
Impact of women at USAFA	male	16.1250	3.37687	32
	female	20.0000	3.27872	9
	Total	16.9756	3.69112	41

	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
gender	MSS	164.760	1	164.760	5.209	.029	.136
	combat	41.045	1	41.045	1.269	.268	.037
	jobs	57.012	1	57.012	1.913	.176	.055
	impact	163.383	1	163.383	17.417	.000	.345

### Correlations Among Sexism Scales and Physical Performance

Bivariate correlations were calculated to identify relations between sexism and predictors on attitudes toward physical fitness standards. The results in Table 4 show that ratings of women's roles in combat and jobs for women in the military tended to cohere. That is, cadets' views on women's roles in combat were associated with their views concerning women's assignments to certain jobs in the military ( $r = .72$ ,  $p < .01$ ). As

anticipated, the perceived impact of women on physical fitness standards tended to cohere with measures of sexism in society and jobs for women in the military ( $r = .31$ ,  $p < .05$ ;  $r = .38$ ,  $p < .05$ ), and in women's roles in combat and the impact of women at USAFA ( $r = .45$ ,  $p < .01$ ;  $r = .75$ ,  $p < .001$ ). Figure 3 also illustrates the relationships between these variables. The results showed that high sexist attitudes toward women in society slightly correlate with indicators of physical performance in the military and correlate strongly with the belief that female cadets have a negative impact on physical fitness standards, which support the second and third hypothesis. It is also essential to note that high sexist attitudes toward women in society, women in combat roles, and women in certain military jobs corresponded with the perception that female cadets negatively impact the overall image of USAFA ( $r$  ranges from .31 to .36,  $p < .05$ ).

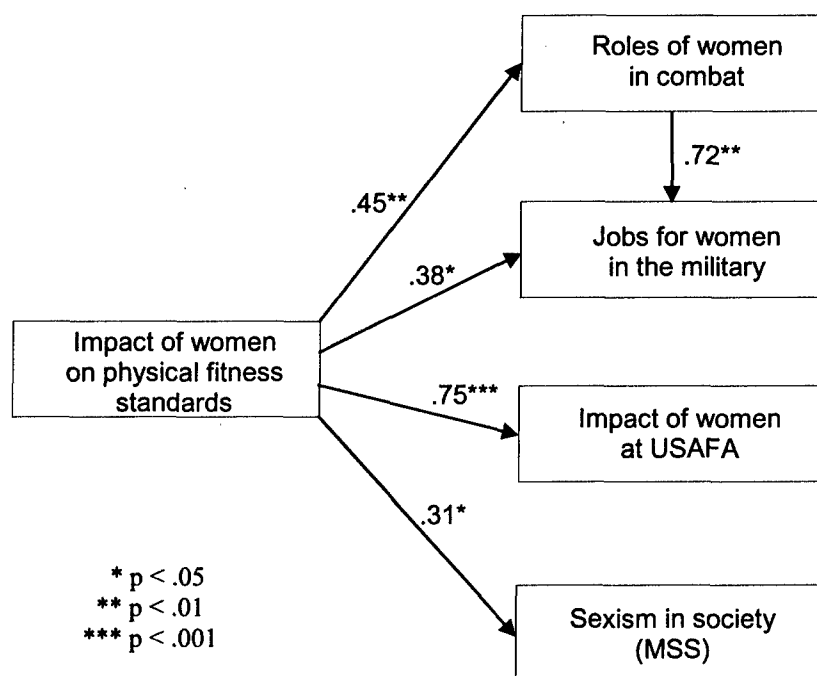


Figure 3. Correlations among sexism scales and impact of women on the physical fitness standards.

### **Influence of Sexism Scales on Physical Fitness Standards**

Logistic regression, which attempts to identify combinations of independent variables that best predict membership in a particular group, was conducted to determine the factors which influence opinions supporting either equal or equitable standards for physical fitness testing at USAFA. The logistic regression results are presented in Table 5. Four models are presented with a discrete dependent variable of whether physical fitness standards should be the same for male and female cadets or different and equitable due to physiological differences (Yes = 1 if standards should be different, and No = 0 if standards should be the same). By using indicators of sexism, the models attempted to identify the best combination of measures that predicted if cadets support different standards for the physical fitness test. Model 1 included all four indicators of sexism (MSS, roles of women in combat, jobs for women in the military, and impact of female cadets at USAFA). Model 2 included everything from Model 1 except for the impact of female cadets at USAFA. Model 3 used the roles of women in combat and jobs for women in the military, and Model 4 only used jobs for women in the military.

Forward logistic regression results indicated the overall model of one predictor, egalitarian views on military jobs, was statistically reliable in distinguishing between cadets who supported different physical fitness standards and equal standards (-2 Log Likelihood = 32.54,  $\chi^2(1) = 4.94$ ,  $p < .05$ ). This model, Model 4, correctly predicted 85.4% of the cases. The coefficient on the jobs for women in the military variable had a Wald statistic equal to 4.22 which is significant at the .05 level. The Nagelkerke  $R^2$  was .19 and Cox & Snell  $R^2$  was .11.



Table 4

*Correlations Among Sexism Scales and Physical Performance*

	MSS	combat	impact	jobs	trained09	frontline11	effective12	combat17	physical20	image22
Pearson Correlation	1	.260	.285	.240	.133	.217	.202	.327(*)	.312(*)	.313(*)
Sig. (2-tailed)		.101	.071	.130	.408	.173	.205	.037	.047	.046
N	41	41	41	41	41	41	41	41	41	41
Roles of women in combat	.260	1	.369(*)	.719(**)	.811(**)	.779(**)	.798(**)	.700(**)	.453(**)	.358(*)
Pearson Correlation										
Sig. (2-tailed)	.101		.018	.000	.000	.000	.000	.000	.003	.021
N	41	41	41	41	41	41	41	41	41	41
Impact of women at USAFA	.285	.369(*)	1	.346(*)	.224	.296	.255	.111	.751(**)	.838(**)
Pearson Correlation										
Sig. (2-tailed)	.071	.018		.027	.158	.060	.108	.490	.000	.000
N	41	41	41	41	41	41	41	41	41	41
Women and military jobs	.240	.719(**)	.346(*)	1	.655(**)	.466(**)	.498(**)	.675(**)	.380(*)	.340(*)
Pearson Correlation										
Sig. (2-tailed)	.130	.000	.027		.000	.002	.001	.000	.014	.030
N	41	41	41	41	41	41	41	41	41	41
trained09	.133	.811(**)	.224	.655(**)	1	.498(**)	.458(**)	.575(**)	.323(*)	.292
Pearson Correlation										
Sig. (2-tailed)	.408	.000	.158	.000		.001	.003	.000	.039	.064
N	41	41	41	41	41	41	41	41	41	41
frontline11	.217	.779(**)	.296	.466(**)	.498(**)	1	.505(**)	.575(**)	.335(*)	.235
Pearson Correlation										
Sig. (2-tailed)	.173	.000	.060	.002	.001		.001	.000	.032	.139
N	41	41	41	41	41	41	41	41	41	41
effective12	.202	.798(**)	.255	.498(**)	.458(**)	.505(**)	1	.467(**)	.349(*)	.254
Pearson Correlation										
Sig. (2-tailed)	.205	.000	.108	.001	.003	.001		.002	.025	.109
N	41	41	41	41	41	41	41	41	41	41
combat17	.327(*)	.700(**)	.111	.675(**)	.575(**)	.575(**)	.467(**)	1	.173	.102
Pearson Correlation										
Sig. (2-tailed)	.037	.000	.490	.000	.000	.000	.002		.280	.527
N	41	41	41	41	41	41	41	41	41	41
physical20	.312(*)	.453(**)	.751(**)	.380(*)	.323(*)	.335(*)	.349(*)	.173	1	.534(**)
Pearson Correlation										
Sig. (2-tailed)	.047	.003	.000	.014	.039	.032	.025	.280		.000
N	41	41	41	41	41	41	41	41	41	41
image22	.313(*)	.358(*)	.838(**)	.340(*)	.292	.235	.254	.102	.534(**)	1
Pearson Correlation										
Sig. (2-tailed)	.046	.021	.000	.030	.064	.139	.109	.527	.000	
N	41	41	41	41	41	41	41	41	41	41

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 5

*Logistic Regression Results*

Variable	Model 1		Model 2		Model 3		Model 4	
	B	Wald	B	Wald	B	Wald	B	Wald
Impact of women at USAFA	.04	.07	--	--	--	--	--	--
MSS	-.09	.93	-.08	.89	--	--	--	--
Roles of women in combat	-.20	1.79	-.20	1.71	-.18	1.60	--	--
Women and military jobs	.35	4.46	.36	4.65*	.31	4.68*	.18	4.22*
Constant	-4.49	1.34	-4.20	1.31	-5.77	3.39	-4.21	2.34
Model X <sup>2</sup> (df)	7.67 (4)		7.60* (3)		6.66* (2)		4.94* (1)	
% Correct	87.8		87.8		85.4		85.4	
Nagelkerke R <sup>2</sup>	.29		.29		.25		.19	
Cox & Snell R <sup>2</sup>	.17		.17		.15		.11	

Note. Dependent variable is whether cadets support different physical fitness standards or equal

standards (Yes=1, No=0). \*  $p < .05$

The results from Model 4 indicated that as cadets expressed higher egalitarian views toward women's roles in the military and in specific military jobs, they were more likely to support equitable physical fitness standards; cadets who were more egalitarian in their views of females in the military workforce were supporters of different/equitable physical fitness standards, and cadets who were less egalitarian and more sexist in their views of females in the military workforce were supporters of equal standards of physical fitness.

### **Cadet Understanding of Standards**

A content analysis of questions 24 to 29 yielded interesting results regarding cadets' understanding of standards at USAFA and why these standards exist. In academic standards, approximately 76% of the cadets surveyed agreed that individuals are responsible for their own academic performance, academic instructors grade as objectively as possible, and both male and female cadets are held to the same academic

standards. Cadets believed that academics are tough for both males and females; however, about 10% of the cadets surveyed perceived that female cadets receive preferential treatment from academic instructors and their peers. In one example, a male cadet stated that he and a female cadet answered the same question incorrectly on a test. Both the male and female cadet argued in support of their answer and the academic instructor awarded points back only to the female cadet. The male cadet may not have successfully argued in support of his answer or other factors may have contributed to the final decision of awarding points, so we cannot draw causal connections solely on favoritism. Regardless of the outcome and facts concerning the decision, the perception of preferential treatment in academic standards toward female cadets exists.

In military standards, approximately 56% of the cadets surveyed agreed that individuals are responsible for their own military performance and professionalism. Since male and female cadets, as well as male and female officers, have the same military objectives, most cadets agreed that the military standards were the same for both men and women. About 27% of the cadets surveyed believed that females have different standards or have different expectations regarding their military performance at USAFA. These cadets noted that females seem to have less stringent dress and appearance standards than men and that these relaxed standards allow females to get away with substandard military performance. For example, females can wear princess-cut uniform shirts (i.e. uniform shirts that are not tucked into the uniform pants), they can grow their hair longer, and placement of nametags and other insignia differ. Approximately 10% of the cadets also perceive preferential treatment toward females regarding high-ranking

leadership positions in the cadet wing. These cadets believed that most female cadets in positions of leadership did not earn the position but are in the position due to quotas.

Cadets expressed the most displeasure with the different standards of physical fitness testing. Overall, about 69% of the male cadet participants believe female cadets have a negative impact on physical fitness standards. About 33% of the female cadet participants also believe physical fitness standards are negatively impacted by the presence of females at USAFA. Contrary to the hypothesis that cadets will have little understanding of the equitable nature of physical fitness standards, approximately 66% of the cadets surveyed realized male and female physical fitness standards are different based on physiological differences. Although cadets understood the standards exist based on scientifically proven differences in the human body, approximately 17% openly expressed negative stereotypes of female cadets and negative attitudes toward females concerning physical standards. These cadets (about 17%), who were all male, believed physical fitness tests were easier for women and that their lower level of performance brought the standards down for everyone else. About 10% of the cadets knew the standards existed based on physiological differences but believed that female cadets are given an advantage over men because their standards are lower. These cadets stated that the standards for female cadets are lowered too much, women should not do certain jobs in the Air Force due to physiological differences, and female cadets have it much easier than male cadets. About 17% of cadets surveyed supported equal standards of physical fitness testing. These cadets stated that if females are expected to work alongside males in the operational Air Force, that they should have the exact same standards.

## CHAPTER IV

### DISCUSSION

Equal fitness standards, if adopted at USAFA, place female cadets in a precarious position. On one hand, female cadets are more likely to fail since the standards will most likely be based on the male cadet standards and their physiological levels. Male cadets will stop complaining that the female standards are too low, and they will be content with the fact that both men and women train the same to accomplish the same mission; however, male cadets at USAFA will most likely begin to exhibit attitudes similar to male cadets at VMI, who continue to hold negative attitudes toward females because now they are not as good physically compared to males. If USAFA maintains the current equitable standards based on "equality of effort," many male cadets will continue to resent what they perceive as lower standards for women (Diamond & Kimmel, 2004). The second hypothesis of the study states that cadets will have little understanding of the equitable nature of physical fitness standards, and this lack of understanding prevents equal status in the cadet wing and prevents male cadets from full acceptance of women at USAFA. Although almost all the cadets understood that male and female physical fitness standards existed due to physiological differences, only one male cadet understood the equity of the testing; this male cadet provided a textbook answer on the equity of the testing, that the actual standards are different but the level of difficulty for the testing is approximately equal for men and women.

USAFA leadership may be able to use the results of this study to focus on the doctrine of equitable physical fitness testing and possibly add to the gender education and

training in order to increase positive contact and decrease negative attitudes. A change in attitudes requires either a change in the standards or the understanding of why these equitable standards exist. Since men and women are physiologically different and the Academy standards are proven as fair and challenging for both sexes, further change in standards is not the answer. USAFA leadership must focus on the attitudes of cadets and ensure perceptions of preferential treatment based on gender are met with education on why certain standards exist.

One part of the contact hypothesis calls for the support of intergroup contact from authority figures in order to reduce prejudice and negative attitudes. USAFA leadership would benefit from an official explanation and support for current gender-normed physical fitness standards through briefings and official USAFA Instructions. They should also emphasize the fact that physical fitness testing at USAFA exists for maintaining optimum levels of physical fitness based on physiological differences in males and females. The female cadet standards are not lowered for men, as many male cadets believe that female cadets have a negative impact on physical fitness standards, but female cadet standards require an equitable amount of effort and physical exertion. It is also important to stress and support positive contact with female cadets in the USAFA environment, since both male and female cadets are measured and tested together and with one another. Cadets relate to each other using the different measures at USAFA, including academic grades, military performance, and especially physical fitness standards.

Also, the standards for female cadets are not any easier compared to standards for male cadets because of the physiological differences in men and women; since the

average woman physiologically performs at a lower level than men, their physical fitness standards reflect a similar level of fitness (Thomas et al., 1976). Current gender climate policies instruct cadets how to do things and when to do them, but do not inform cadets why policies exist. Military protocol usually directs members to follow orders without question; however, discrepancies or misunderstandings in policies may lead to a degradation of unit cohesion. People may accomplish tasks quicker without questioning orders regarding simple matters such as fixing a jet, but complex issues like religion and gender relations require a little more thought and explanation.

If the cadets and leadership do not or are not willing to understand these differences, the negative attitudes toward women will remain. According to the results of this research, cadets accept the fact that differences exist, however, they are much less willing to accept the differences as equitable. Education of equity, and the difference between job-related performance measures and physical fitness measures, can possibly improve the gender climate at USAFA. The cadets who supported equal fitness standards based on their beliefs of job-performance do not understand the purpose of physical fitness standards and testing compared to actual job-related performance measures. A problem arises because these cadets perceive a connection between physical fitness standards in a university-type environment with job performance in the operational Air Force. One type of standards are set to maintain high levels of fitness and health while the job-related standards, such as the FACT, are in place to measure the ability of each individual person to accomplish the mission. If cadets can understand that standards change with age (i.e. a 50-year old general isn't expected to do the same physically as a

21-year old lieutenant) they should also understand that standards are different for males and females.

It is not easy to change deep-rooted attitudes towards women at USAFA, especially when cultural norms of masculinity are passed on to each new generation of cadets. DeFleur et al. (1985) stated that it is possible to change these traditional norms only over a long period of time through a combination of changes in Academy programs, including efforts to broaden the social backgrounds of male cadets, strong affirmative efforts to increase the numbers of women officers in positions of power, and the increase of female cadets in the cadet wing. At the conclusion of their study of attitudes toward women at USAFA, DeFleur et al. recommended numerous changes for improved gender integration including active networking and support groups for female cadets and officers, the introduction of more female cadets in the cadet wing, an examination into gender differences at USAFA, and the recruitment of high-ranking female officers to positions of authority. It is inspirational to know that at the time of this writing, the Air Force chose Brigadier General Susan Desjardins to succeed Brigadier General Johnny Weida as the new Commandant of Cadets at USAFA. Brigadier General Desjardins, USAFA Class of 1980, will join Dean of Faculty Brigadier General Dana Born, USAFA Class of 1983, to occupy two of the top three leadership positions at USAFA by the end of 2006. From the top leadership positions at USAFA, these female officers can function as roles models to junior female officers and female cadets, and also "...send a clear signal to the Academy concerning the role and respect for female officers..." (DeFleur, 1985, p. 167).

The Agenda For Change was an essential step toward cultural change and reversing years of institutional discrimination toward women at USAFA. The Fall 2004



Cadet Climate Survey (Gray et al., 2004) shows an improvement in attitudes toward women at the Academy. As current classes graduate and new classes enter under the system regulated by the Agenda For Change, the old culture of masculinity and harassment will fade away as fewer policies remain that reinforce the old way of life. The creation and implementation of radical changes in culture, military training, living environment, and harassment and sexual assault reporting procedures is the first step towards creating an egalitarian environment at USAFA. Future classes of cadets will learn and embrace these changes as if they were always there. The attitudes of these future male and female cadets, and their responses on these assessments, will ultimately show the progress of the Agenda For Change and its affects on the culture at USAFA.

The Agenda For Change has great potential to improve the acceptance of women and create a more hospitable environment for them at USAFA, but it needs improvement in order to focus on the entire picture of cultural change at USAFA. By initially placing concentration on the gender integration aspects of the culture at USAFA, the Agenda For Change does not address the military, physical fitness, and spiritual aspects of the cadet culture in depth. The Fowler Commission Report (2003) found that the Agenda For Change did not go far enough to institutionalize permanent change in the culture at USAFA. According to the report:

The *Agenda For Change* recognizes that the sexual assault problems at the Academy are related to the culture of the institution, yet is does not go far enough to institute enduring changes in the culture and gender climate at the Academy.

(p. 14)

If the Agenda For Change is successful in bringing about a transformation in the gender climate at USAFA, other institutions may be able to do the same for their environments. A culture change directed by the Agenda For Change, or similar tool, should not be mirrored at other military institutions until change can occur with focus on all aspects of cadet life.

The Agenda For Change is a starting point in changing attitudes toward women, but it is not going to change much if cadets and Academy leadership do not take the risk involved with changing the social climate at USAFA. Allan Johnson (1997) states that promoting change is risky business and that everyone is adapted to their way of life in society, which is familiar and predictable and can seem preferable to the unknown. Changes in the system may result in confusion and fear, so people don't take the risk of changing their way of life and are reluctant to emerge from their comfortable existences. Even though USAFA has started down this path of change while bringing along the unknowns and fear and confusion, some people within the system continue to build walls in defense of a way of life that has been established for quite some time. These walls make it difficult for agents of change to get information about the system and to give information about inequality within the system.

### **Limitations**

It is important to note that the participants involved in this study were not from an entirely random sample of cadets at USAFA. The cadets in the BehSci110 and BehSci310 courses, at the time of research, make up the DFBL research participant pool. Every cadet at USAFA must take the BehSci110 and BehSci310 courses as graduation requirements and each course changes in demographics with each semester; however, the

courses are fairly mixed with fourth-class male and female cadets in BehSci110, and male and female cadets in the upper three classes attending BehSci310.

Since time is a precious commodity in a total institution such as USAFA, cadets do not normally volunteer for extra work in droves. Even with some type of compensation for extra work, cadets must still manage their time and refuse to participate in many of the requests for research participation at USAFA. Although cadets were offered the possibility of an increase in their final grades, many cadets did not sign up to participate in the study. Monetary compensation for participation is an option, as most people are motivated by prospects of easy money; however, the USAFA IRB prohibits this type of benefit for cadet participants.

The greatest limitation to this study was the reaction to this research by USAFA leadership and considerable oversight and emphasis placed on approving the survey. Due to the current gender climate and media attention focused on USAFA, sensitivity to this study and Academy leadership oversight was a hindrance to data collection efforts. In addition to standard USAFA Institutional Review Board (IRB) procedures and survey review through USAFA Plans and Programs, the USAFA Superintendent and Vice Superintendent also spent a great deal of time reviewing the research for approval. The USAFA IRB approved this research as exempt from IRB oversight; however, USAFA administration noted the sensitivity of the survey questions and sent the research package up to the Vice Superintendent of the Air Force Academy, who is a 2-star general. Although this sensitive topic warrants some added attention as a precautionary measure against the possibility of another scandal at USAFA, this prolonged reaction process illustrates how a system can prevent people from making waves about or even

investigating sensitive issues. Ultimately, the USAFA leadership approved the research and did not provide any input or request any changes regarding the content of the research.

### **Future study**

DeFleur et al. (1985) suggested a thorough examination of areas where differences between male and female cadets are intensified. The Air Force Academy will need to step back from the whirlwind of scandals, media attention, and rapid changes to the culture to focus on the primary goals and Air Force Academy Mission, which is "To develop and inspire Air and Space leaders with vision for tomorrow" (HQ USAFA, 1996, p. 226). In order to focus on developing and inspiring future officers of the U.S. Air Force, USAFA leadership must analyze the training, education, and activities of cadet programs to see if they fall in line with the overall mission. Do certain aspects of the Four Class system or some athletic events contribute to the primary goals of USAFA? What practices and traditions hinder cadets and leadership from producing future leaders for the Air Force? These are some examples of questions USAFA leadership should ask to focus on problem areas that do not contribute to the goals of the Academy.

The focus of this study, differences in physical fitness standards, is an area where differences are intensified between male and female cadets. Differences in performance cannot be eradicated but USAFA leadership should recognize that "...as males observe and 'learn' that young women do not perform [well] in some areas, there is an immediate decline in favorable orientations toward women (DeFleur et al., 1978)" (DeFleur et al., 1985, p. 168). This study revealed that 60% of survey respondents believed women had a negative impact on physical performance standards. Male cadets realize there are

standards for women, which will bring the gap between male and female standards closer together. Future studies should investigate why some male cadets favor equal standards rather than equitable standards.

Studying attitudes toward equitable physical fitness standards at USAFA may also provide a foundation for a study of attitudes toward women and physical fitness standards in other federal service academies and in active duty military branches. For example, further research in these other settings may show that Naval Academy cadets or military members of the active duty Army hold similar attitudes toward women. Not only will future studies reveal important information about the attitudes of the armed forces in general, leaders from each service can use results from these studies to educate their troops and create a more cohesive work environment for male and female members.

Since the Fall Cadet Climate survey is a standard annual survey of attitudes, researchers can use future data from the survey to gauge changes in attitudes toward women. Although the data from the 2004 Fall Cadet Climate survey (Gray et al., 2004) supports an improvement in the acceptance of women at USAFA by male cadets over the past few years, additional studies and focus on subsequent surveys are required before reaching firm conclusions regarding the impact of the Agenda For Change on the acceptance of women at USAFA. If the Academy leadership decides to change cadet training and education, to include training and education on gender-normed physical fitness standards, results from future Cadet Climate Surveys may show changes in attitude. The results may show a trend toward an improvement in attitudes toward female cadets, ultimately creating a stronger argument for the Agenda For Change and additional briefings on the equitable physical fitness standards. On the other hand, if data from

successive Fall Cadet Climate surveys does not show a trend in improvement, or even a decrease in attitudes toward the acceptance of women, we must evaluate the effect of the Agenda For Change and briefings on the physical fitness test and suggest a new course of training to improve attitudes and education on gender integration.

Although the Agenda For Change has initiated much needed change in the gender climate at USAFA, it also significantly impacts the military training and tradition that at USAFA. The Agenda For Change may effectively improve attitudes toward women, but may be detrimental to the military discipline past graduates have called their greatest stress management tool in life. By eliminating the Fourth Class system, which subjected fourth-class cadets to constant humiliation and discipline under an adversative method, cadets no longer endure a similar level of emotional, physical, and psychological stress that graduates experienced before the Agenda For Change. Further research should examine the influence of the Agenda For Change and elimination of the Fourth Class system on the ability of cadets' and graduates' performance at USAFA and in the operational Air Force. The research should compare performance aspects of USAFA graduates who were subjected to the policies of the Agenda For Change, compared to graduates who were under the old Fourth Class system.

### **Conclusion**

Historically for USAFA, success lays in maintaining the status quo rather than changing the institution (DeFleur et al., 1985). DeFleur et al. also noted that during the initial period of integration, USAFA seemed to rely only on contact as a change strategy rather than actively bringing about change in the environment. The Agenda For Change calls for an active change in the behaviors and attitudes of cadets, which is an excellent

foundation for future change at USAFA. Many male cadets still do not accept or understand the gender-normed physical fitness standards. As long as male cadets accept the status quo, do not receive education on the purpose of physical fitness testing and the scientific development of standards, and continue to deny the explanation of differences between male and female physical fitness standards, male cadets will continue to use these differences as justification why females do not belong at USAFA. Although the majority of survey respondents understood the physiological differences between men and women, male cadets held very high sexist attitudes toward women and some of the male cadets held very strong negative beliefs about women and expressed perceptions of substandard performance on physical fitness tests.

In a total institution, where cadets are constantly involved in intergroup contact, the beliefs of just a few individuals are enough to perpetuate negative attitudes toward female cadets. Ferber (2003) noted that "...a diverse, equitable climate that provides education about race and gender inequality as well as goals and tasks that enable people to work together to explore and eliminate inequality, is particularly important" (p. 328). Without such a climate that encourages discussion about inequality, reduces and eliminates perceptions of preferential treatment, and provides education on equity and equality, USAFA will continue to struggle with issues of negative attitudes toward females. In support of the Agenda For Change, a concentrated focus on changing gender attitudes through education is the next step in providing cadets with a diverse and equitable climate. This will ultimately help the Air Force Academy accomplish its mission to develop and inspire leaders with vision for tomorrow.

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## APPENDIX A



## University of Colorado at Colorado Springs

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**UNDERSTANDING ATTITUDES ON GENDER AND TRAINING  
 AT THE UNITED STATES AIR FORCE ACADEMY**

**USAF Survey Control Number: 05-10 Expiration Date: 11/18/06  
 UCCS IRB Number: 05-076 IRB Expiration Date: 10/08/06**

University of Colorado at Colorado Springs  
 Department of Sociology, Masters Program

Dear Participant,

My name is Jimmy Do and I am currently working on my Sociology Master of Arts thesis at University of Colorado at Colorado Springs. Dr. Abby Ferber, associate professor of Sociology and Director of Women's Studies at UCCS, is overseeing my thesis. Dr. Steve Samuels, USAFA/DFBL Associate Professor, is the principal investigator of this study.

I would like to determine the current attitudes of the cadet wing regarding the influence of women in society, the military, and at the Air Force Academy, and level of understanding regarding the impact of gender on standards for male and female cadets. I am asking for your help in the research I am conducting. Due to the limited access of this population your participation is greatly appreciated.

The survey should take approximately 10-15 minutes to complete – please take your time and answer the questions honestly. You are not required to write your name on any of the questionnaires, therefore you and your data will remain anonymous. Your participation in this study is voluntary. Refusal to participate will involve no penalty and you have the right to discontinue participation at any time. There is low risk involved with participating in this study. There are direct benefits from your participation in this study. If you are in the DFBL research participant pool, you will receive credit for your participation in this study.

If you have any comments or questions regarding the conduct of this research, your rights as a research subject, or would like to hear more about the study, please contact me at [jdo@uccs.edu](mailto:jdo@uccs.edu), or 719-597-6993. You can get in contact with Dr. Abby Ferber at [aferber@uccs.edu](mailto:aferber@uccs.edu) or 719-262-4153. You can reach Dr. Steve Samuels at [steven.samuels@usafa.af.mil](mailto:steven.samuels@usafa.af.mil) or 719-333-9893. If you have questions regarding your rights as a research participant or any concerns regarding this project, you may report them – confidentially, if you wish – to Dr. Sandy Wurtele, the UCCS Chairperson of the Institutional Review Board at 719-262-4150.

Thank you very much for your help.

James J.W. Do

**These questions are about the role of women in society.** Please answer the following questions and use the following scale to rate how strongly you disagree or agree with each statement.

<u>Strongly</u> <u>Disagree</u> 1	<u>Disagree</u> 2	<u>Somewhat</u> <u>Disagree</u> 3	<u>Neutral</u> 4	<u>Somewhat</u> <u>Agree</u> 5	<u>Agree</u> 6	<u>Strongly</u> <u>Agree</u> 7
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1. Women often miss out on good jobs due to sexual discrimination. \*  
1                      2                      3                      4                      5                      6                      7
2. It is rare to see women treated in a sexist manner on television.  
1                      2                      3                      4                      5                      6                      7
3. Society has reached the point where women and men have equal opportunities for achievement.  
1                      2                      3                      4                      5                      6                      7
4. It is easy to understand the anger of women's groups. \*  
1                      2                      3                      4                      5                      6                      7
5. Over the past few years, the government and news media have been showing more concern about the treatment of women than is warranted by women's actual experiences.  
1                      2                      3                      4                      5                      6                      7
6. Discrimination against women is no longer a problem in this country.  
1                      2                      3                      4                      5                      6                      7
7. On average, people in our society treat husbands and wives equally.  
1                      2                      3                      4                      5                      6                      7
8. It is easy to understand why women's groups are still concerned with societal limitations of women's opportunities. \*  
1                      2                      3                      4                      5                      6                      7

\*Requires reverse scoring.

These next questions are about the role of women in the armed forces. Please use the following scale to rate how strongly you disagree or agree with each statement.

<u>Strongly</u> <u>Disagree</u>	<u>Disagree</u>	<u>Somewhat</u> <u>Disagree</u>	<u>Neutral</u>	<u>Somewhat</u> <u>Agree</u>	<u>Agree</u>	<u>Strongly</u> <u>Agree</u>
1	2	3	4	5	6	7

9. Women would perform as well in combat as men if they were properly trained.

1 2 3 4 5 6 7

10. Certain civilian and military jobs are so unfeminine that women should be excluded from performing them.

1 2 3 4 5 6 7

11. Women should be expected to serve in combat on the front line.

1 2 3 4 5 6 7

12. If women were assigned to direct combat, the military would become less effective.\*

1 2 3 4 5 6 7

This is a list of jobs that people might have in the armed forces. Assuming women and men receive the same training, please rate how strongly you disagree or agree with whether women should be assigned to each job.

	<u>Strongly</u> <u>Disagree</u>	<u>Disagree</u>	<u>Somewhat</u> <u>Disagree</u>	<u>Neutral</u>	<u>Somewhat</u> <u>Agree</u>	<u>Agree</u>	<u>Strongly</u> <u>Agree</u>
13. Fighter pilot	1	2	3	4	5	6	7
14. Transport pilot	1	2	3	4	5	6	7
15. Mechanic	1	2	3	4	5	6	7
16. Combat zone nurse	1	2	3	4	5	6	7
17. Soldier in hand-to-hand combat	1	2	3	4	5	6	7
18. Base commander	1	2	3	4	5	6	7

\*Requires reverse scoring.



The following questions are about women at the US Air Force Academy.

In your opinion, what impact do female cadets have on:

	Large Negative <u>Impact</u>	Small Negative <u>Impact</u>	No <u>Difference</u>	Small Positive <u>Impact</u>	Large Positive <u>Impact</u>
19. Academic standards	1	2	3	4	5
20. Physical performance standards	1	2	3	4	5
21. Discipline	1	2	3	4	5
22. Overall image of the Academy	1	2	3	4	5
23. My pride in being part of the Cadet Wing	1	2	3	4	5

24. Do male and female cadets have different standards for academic performance?

- ☐ Yes  
☐ No  
☐ Don't know

*Please explain your answer:*

25. Do male and female cadets have different standards for military performance?

- ☐ Yes  
☐ No  
☐ Don't know

*Please explain your answer:*

26. Do male and female cadets have different standards for the physical fitness test?

- ☐ Yes  
☐ No  
☐ Don't know

*Please explain your answer:*

27. Do you think there should be different standards in academic performance?

- ☐ Yes  
☐ No  
☐ Don't know

*Please explain your answer:*

28. Do you think there should be different standards in military performance?

- ☐ Yes  
☐ No  
☐ Don't know

*Please explain your answer:*

29. Do you think there should be different standards in physical fitness performance?

- ☐ Yes  
☐ No  
☐ Don't know

*Please explain your answer:*

**About yourself.**

30. I am: ☐ Male ☐ Female

31. My current rank is: ☐ 4<sup>o</sup> ☐ 3<sup>o</sup> ☐ 2<sup>o</sup> ☐ 1<sup>o</sup>

Additional comments:

Thank you for your time.